

## **REMARKS**

### **I. Overview**

These remarks are set forth in response to the Final Office Action of October 3, 2007 (Final Office Action). Presently, claims 1-5 and 8-11 are pending in the Patent Application. Claims 6-7 have been cancelled. Claims 1, 4, 8, and 11 are independent in nature. In the Final Office Action, claim 11 has been rejected under 35 U.S.C. § 102. Further, claims 1-10 have been rejected under 35 U.S.C. § 103.

In response, *although Applicant disagrees with the rejections, Applicant has amended independent claims in an effort to even more clearly define the Applicant's invention and to facilitate expeditious prosecution. No new matter has been introduced.*

### **II. Rejections Under 35 U.S.C. § 102**

On pages 2-4 of the Final Office Action, Examiner rejects claim 11 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,701,342 to Bartz et al. (Bartz). In this regard, it is noted that 102 rejections require a finding that the prior art included each element claimed.

Amended claim 11 recites a method for assessing the impact of an indirectly implicated resource within a service level agreement (SLA) in real time. For the convenience of the Examiner, amended claim 11 is reproduced herein as follows:

11. A method for assessing the impact of an indirectly implicated resource within a service level agreement (SLA) in real time, the method comprising the steps of:  
    establishing an SLA directly implicating a performance level for an underlying resource;  
    noting at least one resource upon which said underlying resource depends, wherein the at least one resource is not directly implicated by the SLA;  
    receiving an event arising from said at least one resource;  
    determining whether said event affects said underlying resource in meeting said performance level; and,  
    if said event prevents said underlying resource from meeting said performance level, generating a notification specifying an impact of said event upon said SLA.

Integral to claim 11 is the determination of whether an event arising from a resource that is not directly implicated by a SLA affects the performance level of an underlying resource that is directly implicated by the SLA. Applicant submits that at least this aspect is not disclosed by Bartz. In rejecting the limitations of claim 11, Examiner cited to col. 9, lines 30-67 and col. 10, lines 1-11 of Bartz, which are reproduced below:

FIG. 6 illustrates an example of two SLOs that have been combined into the logical expression of an SLA. SLO1 corresponds to the throughput

associated with a particular resource of the system model. SLO2 corresponds to the response time associated with a particular resource of the managed service. SLO1 states that if the throughput falls below 50 kb/sec for more than 5 minutes, SLO1 is violated. SLO2 states that if the response time is greater than 5 seconds for more than 2 minutes, SLO2 is violated. The overall SLA logical expression is SLO1 AND SLO2. Therefore, if SLO1 and SLO2 are violated, the SLA is non-compliant.

The top two rows 81 and 82 in FIG. 6 correspond to the throughput values and the evaluation results, respectively. Each column in rows 81 and 82 correspond to an 8 minute interval. A true indication in row 82 corresponds to a violation of SLO1. Therefore, columns 84 and 86 correspond to violations of the condition of SLO1. Both of these columns correspond to reductions in throughput below 50 kb/sec for more than 5 minutes, thus resulting in violations of the condition of SLO1. It should be noted that in this example, the grace period is less than the measurement interval. Consequently, every measurement value that violates the condition of SLO1, results in a corresponding SLO violation. For most SLOs, the grace period will typically span multiple measurement intervals. Rows 91 and 92 correspond to the response time and the evaluation results, respectively, associated with SLO2. Each column in rows 91 and 92 corresponds to a 2 minute time interval. Columns 94, 97, 98, 99, 101, 102 and 103 correspond to increases in the response time above 5 seconds for at least 2 minutes, thus resulting in violations of the condition of SLO2. Columns 93, 95 and 96 are identified simply to show periods of compliance of the condition of SLO2.

To determine SLO Compliance, grace periods may be taken into account. For this example, SLO 1 goes into non-compliance 5 minutes into column 84 and remains non-compliant for 3 minutes (i.e., to the end of the measurement period.) SLO 2 goes into non-compliance when the condition is violated for a sustained period of at least two minutes. Thus, SLO 2 is non-compliant during the time periods represented by columns 98, 102 and 103. SLA non-compliance is next determined through the logical combination of non-compliant intervals of SLOs 1 and 2. Since SLO 1 and SLO 2 are "ANDed," the overall SLA is found to be non-compliant for the 1 minute period that begins halfway into column 98 and persists through the end of column 98. This is the only period of time during which both SLO1 and SLO2 are in violation.

As can be seen from the above quoted paragraphs, Bartz determines that a SLA is non-compliant if both the SLO1 (throughput) and SLO2 (response

time) are violated. However, it is noted that in Bartz both the SLO1 and SLO2 are specified within the same SLA. In comparison, the Applicant's claimed invention determines if an event arising from a resource that is not specified in a SLA will affect the performance level of an underlying resource that is specified in the SLA. Therefore, in the Applicant's claimed invention the "at least one resource" and the "underlying resource" are specified in different SLAs, not in the same SLA.

Accordingly, Applicant submits that Bartz does not teach each element claimed in independent claim 11.

### III. Rejections Under 35 U.S.C. § 103

On pages 4-17 of the Final Office Action, Examiner rejects claims 1, 3, 8, and 10 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,893,905 to Main et al. (Main) in view of Bartz; claims 2 and 9 under 35 U.S.C. § 103(a) as being unpatentable over Main in view of Bartz and further in view of U.S. Patent No. 6,925,493 to Barkan et al. (Barkan); claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Main in view of Barkan; claims 5-6 under 35 U.S.C. § 103(a) as being unpatentable over Main in view of Barkan and further in view of U.S. Patent Application

Publication No. 2002/0083166 by Dugan et al. (Dugan); claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Main in view of Barkan and further in view of Bartz. In this regard, it is noted that 103 rejections also require a finding that the prior art included each element claimed.

Amended claim 1 recites a method for performing a real-time service level agreement (SLA) impact analysis. For the convenience of the Examiner, amended claim 1 is reproduced herein as follows:

1. A method for performing a real-time service level agreement (SLA) impact analysis, the method comprising the steps of:
  - detecting an event arising from a specific resource;
  - determining whether based upon said event said specific resource cannot perform adequately to meet a term within an SLA which directly implicates said specific resource; and,
  - further determining whether based upon said event said specific resource inhibits another resource from performing adequately to meet a term within another SLA which does not directly implicate said specific resource, but directly implicates said another resource.

Integral to claim 1 (and also claims 4 and 8) is the further determination of whether based upon the event the specific resource inhibits another resource from performing adequately to meet a term within another SLA which does not directly implicate the specific resource, but directly implicates the another resource. Applicant submits that at least this limitation is not disclosed by any of the cited references or any combination thereof. In the Final Office Action, Examiner concedes that Main does not disclose this

limitation, but asserts that Bartz discloses this limitation citing to col. 9, lines 30-67 and col. 10, lines 1-12 of Bartz.

As already discussed above, Bartz discloses in col. 9, lines 30-67 and col. 10, lines 1-12 a logical expression SLO1 AND SLO2 which determines that a SLA is non-compliant if both the SLO1 (throughput) and SLO2 (response time) are violated. However, it is noted that in Bartz both the SLO1 and SLO2 are specified within the same SLA. In comparison, the Applicant's claimed invention determines, based upon an event arising from a specific resource, if the specific resource inhibits another resource from performing adequately to meet a term within another SLA which does not directly implicate the specific resource, but directly implicates the another resource. Therefore, in the Applicant's claimed invention the "specific resource" and the "another resource" are specified in different SLAs, not in the same SLA.

The other cited references do not cure the deficiencies of Main and Bartz. Accordingly, Applicant submits that none of the cited references, individually or in any combination, teaches each element claimed in independent claims 1, 4, and 8. Claims 1, 4, and 8 are, therefore, believed to

be patentable over the cited art. Dependent claims are believed to be patentable as well at least due to their dependency on the patentable independent claims.

#### IV. Conclusion

Applicant respectfully requests the withdrawal of all the rejections owing to the amendments and foregoing remarks. The Applicant requests that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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/Steven M. Greenberg/

Steven M. Greenberg  
Reg. No.: 44,725  
**Customer No. 46320**